

### ABSTRACT

An air conditioner includes a fixed displacement-type first compression mechanism and a variable displacement-type second compression mechanism independent from each other in a refrigeration cycle, and further includes second compression mechanism displacement control means, compression mechanism operation switching control means, an evaporator for refrigerant, a condenser, a blower, evaporator temperature detection means, and evaporator target temperature calculation means. When the refrigeration cycle is operated only by the first compression mechanism, referring to a temperature ( $T_{eva}$ ) detected by the evaporator temperature detection means, a temperature ( $T_{off}$ ) calculated by the evaporator target temperature calculation means and a predetermined value  $A$ , if a condition of  $T_{eva} - T_{off} \geq A$  is satisfied, both compression mechanisms are operated simultaneously. The condition of required cooling ability is properly determined, an optimum control for air conditioning is realized, and the loss of consumption power and the like can be adequately suppressed.